MEETING SUMMARY

TO: Modeling Task Force Members

FROM: Dale Iwai

SUBJECT: Modeling Task Force Meeting Summary

MODELING TASK FORCE MEETING

March 22, 2006 - Wednesday
9:30 A.M. - 11:30 A.M.

Southern California
Association of Governments
818 W. 7th Street, 12th Floor
Los Angeles, CA 90017
Room – Riverside A

Attendees

Dale Iwai
Firooz Hamedani
Archie Tan
Jimmy Chen
Henning Eichler
Keith Killough
Eric Bierce
Ed Humenik
Vin Kumar
Luke Cheng
Arnie Sherwood
William McKenna
Jonathan Nadler
Kathy Hsiao
Chaushie Chu
Rena Lum
Anup Kulkarni
Srini Bhat
Ping Chang
Teresa Wang

MEETING SUMMARY

1.0 Call to Order

Modeling Task Force Chairman Mony Patel, LA City, called the meeting to order. This was followed by self introductions by members of the MTF and others at the meeting.

2.0 Public Comment Period – There were no comments

3.0 Consent Calendar - Review and Approve Previous Meeting Summary – Minutes approved

4.0 Information Items

4.1 Update on Emission Factors. Doug Thompson, ARB – via teleconference, provided a status report on the development of the new emission factors. Testing of trucks, show that emissions from trucks to increase due to frequency of tampering and mal-maintenance. Permeation effects from ethanol causes organic gases to leak from hoses, which will increase ROG emissions.

There are a number of significant changes – some will decrease, and others will increase the emissions. New vehicle mix will be developed using DMV's 2004 and 2005 data. Once the vehicle mix data is 5 years old, it falls out of conformance with EPPAs latest fine assumption requirements. ARB wants the emission model to be good for at least 3 years and plan to update the model on a tri-annual basis. Currently pending registration of motor vehicles is not included in the vehicle mix, and ARB is looking at ways to include these late registrations which will affect the vehicle mix data.

Extensive review of summer emissions will probably increase emissions in ROG and decrease emissions in NOX.

Last year, ARB, redistributed VMT from the heavy-heavy duty trucks (>33,000 lbs GVW) statewide. There were discussion about the VMT distribution with SCAG and ARB is waiting for some new data from SCAG's interim model. The expectations are that the heavy-heavy truck VMT will be higher in the desert areas compared to the PATH, and maybe slightly lower in the SCAB area. ARB is interested in SCAG's latest external truck model results.

For additional information, refer to: http://www.arb.ca.gov/msei/msei.htm

A question was asked - what is ARB's HDT definition? How does it compare with AQMD and Caltrans's HPMS? Deng Bang. Lee stated that SCAG has several recommendations that should be discussed, perhaps at a separate meeting. Jonathan Nadler will set-up the meeting.

4.2 Metrolink's 2006 On-Board Survey. Henning Eichler, SCRRA, gave a presentation on Metrolink's upcoming on-board survey (May, 2006) which is conducted bi-annually. The last survey was on June, 2004. The on-board survey collects data about the riders such as: Origin-Destination, demographics, mode choice, and attitudes.

Some of the highlights presented about the service and its riders from the 2004 survey:

- Metrolink lines serve 5 counties in SCAG, and one to Oceanside, San Diego.
- Metrolink is the mode with the longest travel distance (36.2 miles - one way).
- Rider ship on Metrolink has grown by 23 percent (8.5 MAT to 10.4 MAT) since 2004.
- More than eighty-seven percent (87.7%) of riders are commuters (work related trips).
- Median household income of the riders is around $72,400.
- The riders have an average of 2.3 autos per household.
- About half of the riders are Caucasian (46%), Hispanics represent 23%, followed by Asian/Pacific (15%), African American (13%), and other (3%).

Copies of the survey were distributed and discussed. Surveys are distributed on the inbound and outbound lines. Although the survey instrument is rather long, most riders fill out the questionnaires. Probably due to the time spent on the train. Stations and the parking lots are owned by the cities in which the station is located. There are standees on some lines, generally when the train is closer to Downtown.

Additional questions can be addressed to Mr. Eichler at (213) 452-0212 or email to eichlerH@scrra.net

Copy of the slide presentation is located on SCAG's website.

4.3 OWP06-07 Projects. Modeling projects for the next fiscal year were reported by the modeling managers for SCAG, MTA, OCTA, and City of Los Angeles.

Deng Bang Lee presented SCAG's modeling projects for next fiscal year

- *Highway Inventory.* This project will update service attributes of the regional freeways and arterials collected in phase 1.
- *Sketch Plan Model.* This project is to develop tools for quickly testing many scenarios, assumptions, and performance measures. The model will be user friendly which will allow planners to test global policies and screen a large number of transportation improvement scenarios. This in turn will help reduce the amount of alternatives to be run on the regional demand model for more rigorous analysis.
- *Weekend Travel Demand Model.* This project is to develop a travel demand model to forecast weekend travel. As part of the Year 2000 Post Census Travel Survey, SCAG collected travel survey data for weekends. The data will be supplemented by Caltrans' traffic information on

weekends, plus PeMS data which includes flow and speed data for weekends.

- *Master Network Database.* This project is to develop tools for identifying, coding, editing, and maintaining a database that contain all transportation projects by years (2000, 2010, 2030 etc,), projects (RTP, RTIP, AQMP, etc.), and scenarios (Baseline, Plan, No Build, Build, etc.). The master transportation projects matrix would be linked to a master highway/transit network.
- *Activity Based Model.* Activity based models are considered the state-of-the-art in travel demand modeling and are preferred over the standard 4 step models by academia. They have recently been implemented in New York City, San Francisco, Portland, and Columbus, Ohio. This project would evaluate the benefits of the activity based model implementations and determine if its success could be replicated in the SCAG region.
- *Arterial Speed Study.* Additional field surveys are required to gather additional arterial speed data needed to refine the model's volume/delay functions and validate the model's forecasted speeds.

Chaushie Chu presented modeling projects for MTA.

Chaushie began by introducing Robert Farley recently hired to MTA as the chief modeler for MTA. His immediate assignments will be to conduct the modeling work for the Long Range Plan's transit and highway project performance evaluation and priority ranking; integrate the Unix model run stream with the PC based model run stream; and continue with the freight goods movement modeling project, which was previously managed by Luke Chen (still an MTF member, but now employed by Citilabs). The highlights of planned model enhancement in the next FY include the following:

- *Highway Assignment*. Metro uses modified BPR curves used for freeways using values of alpha= 1.16 and beta= 4.33 which was developed based on observed speed data from Caltrans. Curves for the arterials are the default BPR curves. In the next FY Metro staff will review and test BPR curves used by other agencies and most important, of course, is SCAG.
- *Transit Assignment*. Currently using the common peaking factor between highway and transit and maintain consistency with SCAG. Based on recent experience with FTA, MTA found that fleet requirement, peak hour headway are dependent on the accuracy of the peaking factor for transit. Previous modeling for the Red Line, conducted by consultants, the peaking factor for transit was different from those of highways. In the next FY Metro plans to review transit peaking factors.
- *Mode Choice Model*. The current version of the Metro mode choice model has not been fully accepted by FTA yet. One of the major effort in the next FY, would be to achieve FTA acceptance, then develop New Starts submittal package for the Exposition LRT project.
- *Destination Choice Model*. Metro would re-evaluate the priority among improving various model components. Destination choice model development may not be as critical as time-of-day peak spreading, dynamic traffic assignment, and landuse/transportation integrated models.

- *Freight Modeling***.** Metro plans to complete the development of Cube Cargo model in FY06-07. In the next FY, Metro plans to work with SCAG, other regional modeling partners, and FHWA in developing a hybrid goods movement/freight model. The model would include freight logistic and tour based modeling approaches to model the movement of primary secondary and service industries separately.

Anup Akulkarni presented modeling projects for OCTA.

- *Update OCTAM Model*. OCTA will update the Orange County Transportation Analysis Model to the Orange County Projections 2006. This will entail the expansion of the zones in Orange County, the update of the base year of to the year 2005, and update the horizon year of the model to 2035. The current OCTAM model is consistent with the SCAG model, PC-based, and contains 2,940 zones.
- *Traffic Assignment using TransCAD*. Currently OCTA can perform traffic assignments using TransCAD. The remainder of the OCTAM model components will be updated in a more deliberate timeframe.
- *Corridor Studies.* OCTA will be supporting a number of work efforts related to corridor studies. Currently, there are three major studies that are under way –South County Major Investment Study, Central County Corridor Major Investment Study, and the Costa Mesa Freeway Improvement
- *Operations Modeling* - This will be a packaged study with focus on operations analysis for both existing conditions and preferred alternatives for all freeways within Orange County.
- *Intelligent Transportation Ssystems.* - The Orange County transportation Authority (OCTA) will work with a consultant to develop the Orange County Intelligent Transportation Systems (ITS) Strategic Deployment Plan (Plan). The primary purpose of the Plan will be to develop a prioritized set of projects that set the direction of ITS investments within Orange County over the next 10 years in a coordinated and focused manner. The Plan will replace the existing 1998 Orange County ITS Master Plan and provide a list of viable, cost-effective strategies and projects.

Mony Patel presented modeling projects for City of Los Angeles.

- *Update City Model*. City is currently using a version of the SCAG model which is converted to Emme2. The plan is to convert the City's model to TransCAD when the SCAG's new model using the TransCAD platform is completed.
- *Assist SCAG to update the new model*. The City is assisting SCAG by providing funds for the Heavy Duty Truck Model Improvement project. These funds will be used to supplement the cost of collecting truck survey

data. Also the City is helping collect data from for the City for validating the new SCAG model.

- Transit Priority Lanes. No information available at this time. Click on LADOT link for transit projects to relieve congestion. **http://www.lacity.org/ladot/Congestion/capacity.html#transit**

- *Data Collection*. The City will help collect data from the City's Automated Traffic Surveillance and Control System (ATSAC) such as traffic flow and speed data.

4.4 VDF Curves used in Models in Region. The curves used in the SCAG and MTA models were discussed in section 4.3. Currently the VDF curves used in the four agency models are either the default BPR curves or modifications of the BPR curves. MTA has modified the BPR curve for the freeways about two years ago, the curve used for the arterials are the default BPR. The current SCAG model use the default BPR for both the freeway and arterial. SCAG has modified the BPR curves for modeling the 2007 AQMP using an "Interim" model which use different curves for the freeway (similar to MTA's freeway curve) and arterial (based on study conducted by Dowling Associates). For SCAG's new model, Akcelik curves are being tested and will be used. OCTA and City of Los Angeles models are using the default BPR curves.

In the near term, there are projects to collect more speed data on the region's freeway system, and from the arterial street system. This will enable the region's model(s) to improve the modeling of the volume-speed-capacity relationship. This will be an on-going process.

4.5 Summary of the HPMS Workshop. A 3-day training workshop was held by Caltrans's staff at SCAG (2-days), and at Riverside (1-day) to learn more about the Highway Performance and Monitoring System (HPMS). Ping Wang present a summary of the workshop to the MTF members.

- Attended by approximately 130 representatives from various cities.
- HPMS data is required to be submitted to the Federal Government annually.
- Ninety-four items are needed to be filled out on the form needed to develop the HPMS database.
- Issues.
    - Local agencies do not receive funds for their inputs.
    - Quality of data.
    - Some variables that transportation models need as input are not available such as: speed.
    - Vast amount of data is on the infra-structure and less on traffic characteristics.
    - How can we improve the data in HPMS for use in transportation models?

For more info on HPMS reassessment click on:

http://www.fhwa.dot.gov/policy/ohpi/hpms/hpmsreassessment.cfm

Any slides used in the above presentations can be found on SCAG's website:
http://scag.ca.gov/modeling/mtf/

5.0 Open Discussion and Other Business. – None**.**

6.0 Schedule and Agenda Items for Next Meeting.

The next meeting is scheduled for May 24, 2006.

7.0 Adjournment.

If members have any questions regarding an agenda item, please contact Dale Iwai at (213) 236-1894 or email **at** iwai@scag.ca.gov